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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/813,822

03/31/2004

Jean-luc Couturier

FR-AM 1946 NP

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08/30/2006

ARKEMA INC.  
PATENT DEPARTMENT - 26TH FLOOR  
2000 MARKET STREET  
PHILADELPHIA, PA 19103-3222

EXAMINER

SHIAO, REI TSANG

ART UNIT

PAPER NUMBER

1626

DATE MAILED: 08/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/813,822

Applicant(s)

COUTURIER ET AL.

Examiner

Robert Shiao, Ph. D.

Art Unit

1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/22/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This application claims benefit of the foreign application: FRANCE 03.03999 with a filing date 04/01/2003. However, the certified copy of the instant foreign priority document has not been filed to Office. Applicants are requested to file the priority document to the Office. The instant foreign priority has not been granted herein.
2. Claims 1-16 are pending in the application.

### ***Information Disclosure Statement***

3. Applicant's Information Disclosure Statement, filed on November 22, 2004, has been considered. Please refer to Applicant's copy of the 1449 submitted herein.

### ***Responses to Election/Restriction***

4. Applicant's election without traverse of Group III claims 9-16, in part, in the reply filed on July 07, 2006, is acknowledged.

Claims 1-16 are pending in the application. The scope of the invention of the elected subject matter is as follows.

Claims 9-16, in part, drawn to a process of making compounds of formula (II), wherein the variable n is zero or 1 thereof, the variable X is 1 or 2.

Claims 9-16, in part, embraced in above elected subject matter, are prosecuted in the case. Claims 1-16, in part, not embraced in above elected subject matter, and claims 1-8 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as

being drawn to a nonelected invention.

The requirement is still deemed proper.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 9-16 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the variable Z of formula (II) represents  $\text{CH}_2=\text{CH}-\text{CH}_2-\text{O}-$ ,  $\text{CH}_2=\text{CH}-\text{CH}_2-\text{NH}-$ ,  $\text{CH}_3-(\text{OCH}_2\text{CH}_2)_p-\text{O}-$ , or  $-\text{O}-(\text{CH}_2)_q-\text{O}-$ , wherein the variable p or q is an integer 1 or 4, does not reasonably provide enablement for all mono- or polyfunctional structure without limitation (i.e., in a non-limiting manner or the variable p or q is an integer 100 respectively ), see claim 9, page 4, line 4. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Dependent claims 10-16 are also rejected along with claim 9 under 35 U.S.C. 112, first paragraph.

In *In re Wands*, 8 USPQ2d 1400 (1988), factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. 112, first paragraph, have been described. They are:

1. the nature of the invention,
2. the state of the prior art,

3. the predictability or lack thereof in the art,
4. the amount of direction or guidance present,
5. the presence or absence of working examples,
6. the breadth of the claims,
7. the quantity of experimentation needed, and
8. the level of the skill in the art.

In the instant case:

**The nature of the invention**

The nature of the invention is processes of making compounds of formula (II), wherein the variable Z is unlimited (i.e., in a non-limiting manner or the variable p or q is an integer 100 respectively).

**The state of the prior art and the predictability or lack thereof in the art**

The state of the prior art is that a similar compound having alkoxy or aryloxy moiety, see columns 17-19 of Guerret et al. US 6,657,043.

**The amount of direction or guidance present and the presence or absence of working examples**

The only direction or guidance present in the instant specification is the compounds of Examples 1-6 on pages 6-13. There is no data present in the instant specification for a compound of formula (II), wherein the variable Z represent a moiety

Art Unit: 1626

other than  $\text{CH}_2=\text{CH}-\text{CH}_2-\text{O}-$ ,  $\text{CH}_2=\text{CH}-\text{CH}_2-\text{NH}-$ ,  $\text{CH}_3-(\text{OCH}_2\text{CH}_2)_p-\text{O}-$ , or  $-\text{O}-(\text{CH}_2)_q-\text{O}-$ , and the variable  $p$  or  $q$  is an integer 100 respectively.

### **The breadth of the claims**

The instant breadth of the rejected claims is broader than the disclosure, specifically, the instant claims include any processed compounds, i.e. any compounds of formula (II), wherein the variable  $Z$ ,  $p$ , or  $q$  is not limited, no matter what the chain length and any covalently bonded compounds.

### **The quantity or experimentation needed and the level of skill in the art**

While the level of the skill in the chemical arts is high, it would require undue experimentation of one of ordinary skill in the art to prepare any compounds of formula (II) having mono- or polyfunctional structure or moiety with various substituents can have varying functional groups in varying positions. It would also require undue experimentation to prepare any compounds having mono- or polyfunctional structure moiety of formula (II) with various substituents that would possess similar chemical characteristics for the processes. The only guidance present in the instant specification is the compounds of Examples 1-6, wherein the variable  $Z$  represents  $\text{CH}_2=\text{CH}-\text{CH}_2-\text{O}-$ ,  $\text{CH}_2=\text{CH}-\text{CH}_2-\text{NH}-$ ,  $\text{CH}_3-(\text{OCH}_2\text{CH}_2)_p-\text{O}-$ , or  $-\text{O}-(\text{CH}_2)_q-\text{O}-$ , and  $p$  or  $q$  is 1 or 4, see pages 6-13 of the specification. There is no guidance or working examples present for constitutional any compounds other than compounds of Examples 1-6. Therefore, the claims lack enablement for all compounds of formula (II), wherein the variable  $Z$

Art Unit: 1626

represent a moiety other than  $\text{CH}_2=\text{CH}-\text{CH}_2-\text{O}-$ ,  $\text{CH}_2=\text{CH}-\text{CH}_2-\text{NH}-$ ,  $\text{CH}_3-(\text{OCH}_2\text{CH}_2)_p-$ ,  $\text{O}-$ , or  $-\text{O}-(\text{CH}_2)_q-\text{O}-$ , and  $p$  or  $q$  is an integer 100. Eliminating the limitation "in a non-limiting manner" and limiting the variable  $p$  or  $q$  to be an integer 1 or 4 would overcome this rejection.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "or more generally derived from compounds such as alcohols, polyols, amines, polyamines, epoxides, polyepoxides, esters, polyesters, amides; polyamides, imines, polyamines, polycarbonates, polyurethanes and silicones", is indefinite and ambiguous, see lines 6-8 on the page 4. It is unclear whether the limitation is a portion of the limitation of the variable  $Z$  or the limitation is drawn to another starting materials for the instant processes. Dependent claims 10-16 are also rejected along with claim 9 under 35 U.S.C. 112, second paragraph. Clarification is required, see pages 5-6 of the specification.

### ***Claim Objections***

7. Claims 9-16 are objected to as containing non-elected subject matter, i.e., the variable  $n$  or  $X$  is an integer greater than 2, etc. It is suggested that applicants

amend the claims to the scope of the elected subject matter as defined on the page 2 *supra*.

8. Claims 10-11 are objected. It appears there are typographic errors of the terms "ME" and "abovementioned" in claims 10-11 respectively. Replacement of the term "ME" with the term "Me" and replacement of the term "abovementioned" with the term "above mentioned", would obviate the objection.

9. Claims 13-15 are objected. A symbol "." is missing at the end of each sentence of the claim. Incorporation of a symbol "." into each claim respectively would obviate the objection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Shiao whose telephone number is (571) 272-0707. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should



Art Unit: 1626

you have questions on access to the Private PAIR system, contact the Electronic  
Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'R. Shiao', with a stylized flourish at the end.

Robert Shiao, Ph.D.  
Patent Examiner  
Art Unit 1626

August 22, 2006